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BEFORE THE BOARD OF PATENT APPEALS AND INTERFERENCES

Application Number: 10/717,521
Filing Date: November 21, 2003
Appellant(s): HO ET AL.

Jonathan M Harris (Reg. No. 44,144)

For Appellant

EXAMINER'S ANSWER

This is in response to the appeal brief filed June 25, 2010 appealing from the Office action mailed March 26, 2010.

(1) Real Party in Interest

The examiner has no comment on the statement, or lack of statement, identifying by name the real party in interest in the brief.

(2) Related Appeals and Interferences

The examiner is not aware of any related appeals, interferences, or judicial proceedings which will directly affect or be directly affected by or have a bearing on the Board's decision in the pending appeal.

(3) Status of Claims

The following is a list of claims that are rejected and pending in the application:

Originally Filed Claims: 1-37

Claim Cancellations: None

Added Claims: None

Presently Pending Claims: 1-37

Presently Appealed Claims: 1-37

(4) Status of Amendments After Final

The examiner has no comment on the appellant's statement of the status of amendments after final rejection contained in the brief.

(5) Summary of Claimed Subject Matter

The examiner has no comment on the summary of claimed subject matter contained in the brief.

(6) Grounds of Rejection to be Reviewed on Appeal

The examiner has no comment on the appellant's statement of the grounds of rejection to be reviewed on appeal. Every ground of rejection set forth in the Office action from which the appeal is taken (as modified by any advisory actions) is being maintained by the examiner except for the grounds of rejection (if any) listed under the subheading "WITHDRAWN REJECTIONS." New grounds of rejection (if any) are provided under the subheading "NEW GROUNDS OF REJECTION."

(7) Claims Appendix

The examiner has no comment on the copy of the appealed claims contained in the Appendix to the appellant's brief.

(8) Evidence Relied Upon

Ofek et al. (US 2004/0083284)

Liu et al. (US 7,197,660)

Yip et al. (US 6,954,436)

(9) Grounds of Rejection

The following ground(s) of rejection are applicable to the appealed claims:

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

a. Claims 1, 3-6, 8-12, 14-17, 19-24, 26-29, and 31-37 are rejected under 35 U.S.C. 103(a) as being unpatentable over Ofek et al. (US 2004/0083284), hereinafter referred to as Ofek, in view of Liu et al. (US 7,197,660), hereinafter referred to as Liu.

Regarding claims 1, Ofek discloses discovering a topology object model of the routers **(page 2 paragraph 0021; network topologies are determined and objects corresponding to elements in a domain are stored in a Topology Object Model)**; detecting a condition **(page 2 paragraph 0021; a change in the status of an element is recorded in an associated entity object)**; and displaying an indication of the detected condition **(page 2 paragraph 0021; information contained in the Topology Object Model is graphically displayed)**.

Ofek fails to explicitly suggest detecting a condition *of the at least one backup router group based on at least one threshold value*.

Liu teaches detecting a condition of the at least one backup router group based on at least one threshold value **(a cluster of devices, i.e. figure 1 element 110, comprising a recovery system, i.e. figure 2, with a redundancy group, i.e. column 4 lines 21-30, for detecting failure within the cluster according to a threshold parameter, i.e. column 5 lines 17-25)**.

It would have been obvious to one having ordinary skill in the art at the time the invention was made to incorporate the recovery method taught by Liu into the system for providing data awareness disclosed by Ofek. The motivation for such a modification is the ability to respond quickly to failures without compromising throughput and interrupting service.

Regarding claim 3, Liu discloses wherein the detecting is also based on a number of backup router groups to which one of the routers belongs **(column 8 lines 49-51; each device may act as a master in one redundancy group while simultaneously serving as a backup in another redundancy group)**.

Regarding claim 4, Ofek discloses at least one network router node **(page 2 paragraph 0021; topology of elements in a network)**; at least one network interface for each at least one network router node **(page 2 paragraph 0023; physical representation such as a network interface card)**; at least one address for each at least one network interface **(figure 4; element IP address)**.

Liu teaches a state of each one of the at least one address that is internal to the backup router group **(figure 5 elements 510-530; state information of redundancy group, i.e. master and backup devices)**; and any tracked interfaces associated with each one of the at least one address that is internal to the backup router **(column 6 lines 40-44; each device maintains an IP interface)**.

Regarding claim 5, Liu discloses a state of at least one of the at least one address that is external to the backup router group **(column 5 lines 11-16; detecting failures such link connectivity due to cable or port failures)**.

Regarding claim 6, Liu discloses wherein the detecting is also based on a state of at least one of the at least one address that is external to the backup router group **(column 5 lines 11-16; detecting failures such link connectivity due to cable or port failures)**.

Regarding claim 9, Ofek discloses receiving status information from the routers **(page 2 paragraph 0021; a change in the status of an element)**; and updating the topology object model to reflect the received status information **(page 2 paragraph 0021; the status is recorded in the Topology Object Model)**.

Regarding claim 10, Liu discloses wherein the status information includes states associated with interface addresses within the at least one backup router group **(column 5 lines 17-25; detecting failures of devices within the group)**.

Regarding claim 11, Liu discloses wherein the status information includes status of tracked interfaces associated with routers organized in the at least one backup router group **(column 5 lines 17-25; detecting failures of devices within the group)**.

Regarding claim 12, Ofek discloses means for discovering a topology object model of the routers **(page 2 paragraph 0021; network topologies are determined and objects corresponding to elements in a domain are stored in a Topology Object Model)**; detecting a condition **(page 2 paragraph 0021; a change in the status of an element is recorded in an associated entity object)**; and means for displaying an indication of the detected condition **(page 2 paragraph 0021; information contained in the Topology Object Model is graphically displayed)**.

Ofek fails to explicitly suggest means for detecting a condition *of the at least one backup router group based on at least one threshold value*.

Liu teaches means for detecting a condition of the at least one backup router group based on at least one threshold value **(a cluster of devices, i.e. figure 1 element 110, comprising a recovery system, i.e. figure 2, with a redundancy group, i.e. column 4 lines 21-30, for detecting failure within the cluster according to a threshold parameter, i.e. column 5 lines 17-25)**.

It would have been obvious to one having ordinary skill in the art at the time the invention was made to incorporate the recovery method taught by Liu into the system for providing data awareness disclosed by Ofek. The motivation for such a modification is the ability to respond quickly to failures without compromising throughput and interrupting service.

Regarding claim 14, Liu discloses wherein the detecting is also based on a number of backup router groups to which one of the routers belongs **(column 8 lines**

49-51; each device may act as a master in one redundancy group while simultaneously serving as a backup in another redundancy group).

Regarding claim 15, Ofek discloses at least one network router node **(page 2 paragraph 0021; topology of elements in a network)**; at least one network interface for each at least one network router node **(page 2 paragraph 0023; physical representation such as a network interface card)**; at least one address for each at least one network interface **(figure 4; element IP address)**.

Liu teaches a state of each one of the at least one address that is internal to the backup router group **(figure 5 elements 510-530; state information of redundancy group, i.e. master and backup devices)**; and any tracked interfaces associated with each one of the at least one address that is internal to the backup router **(column 6 lines 40-44; each device maintains an IP interface)**.

Regarding claim 16, Liu discloses a state of at least one of the at least one address that is external to the backup router group **(column 5 lines 11-16; detecting failures such link connectivity due to cable or port failures)**.

Regarding claim 17, Liu discloses wherein the detecting is also based on a state of at least one of the at least one address that is external to the backup router group **(column 5 lines 11-16; detecting failures such link connectivity due to cable or port failures)**.

Regarding claim 20, Ofek discloses means receiving status information from the routers **(page 2 paragraph 0021; a change in the status of an element)**; and

updating the topology object model to reflect the received status information **(page 2 paragraph 0021; the status is recorded in the Topology Object Model)**.

Regarding claim 21, Liu discloses wherein the status information includes states associated with interface addresses within the at least one backup router group **(column 5 lines 17-25; detecting failures of devices within the group)**.

Regarding claim 22, Liu discloses wherein the status information includes status of tracked interfaces associated with routers organized in the at least one backup router group **(column 5 lines 17-25; detecting failures of devices within the group)**.

Regarding claim 23, Ofek discloses the means discovering also receives status information from the routers and updates the topology object model to reflect the received status information **(page 2 paragraph 0021; a change in the status of an element is recorded in the Topology Object Model)**.

Regarding claim and 24, Ofek discloses discovering a topology object model of the routers **(page 2 paragraph 0021; network topologies are determined and objects corresponding to elements in a domain are stored in a Topology Object Model)**; detecting a condition **(page 2 paragraph 0021; a change in the status of an element is recorded in an associated entity object)**; and displaying an indication of the detected condition **(page 2 paragraph 0021; information contained in the Topology Object Model is graphically displayed)**.

Ofek fails to explicitly suggest detecting a condition *of the at least one backup router group based on at least one threshold value*.

Liu teaches detecting a condition of the at least one backup router group based on at least one threshold value **(a cluster of devices, i.e. figure 1 element 110, comprising a recovery system, i.e. figure 2, with a redundancy group, i.e. column 4 lines 21-30; for detecting failure within the cluster according to a threshold parameter, i.e. column 5 lines 17-25)**.

It would have been obvious to one having ordinary skill in the art at the time the invention was made to incorporate the recovery method taught by Liu into the system for providing data awareness disclosed by Ofek. The motivation for such a modification is the ability to respond quickly to failures without compromising throughput and interrupting service.

Regarding claim 26, Liu discloses wherein the detecting is also based on a number of backup router groups to which one of the routers belongs **(column 8 lines 49-51; each device may act as a master in one redundancy group while simultaneously serving as a backup in another redundancy group)**.

Regarding claim 27, Ofek discloses at least one network router node **(page 2 paragraph 0021; topology of elements in a network)**; at least one network interface for each at least one network router node **(page 2 paragraph 0023; physical representation such as a network interface card)**; at least one address for each at least one network interface **(figure 4; element IP address)**.

Liu teaches a state of each one of the at least one address that is internal to the backup router group **(figure 5 elements 510-530; state information of redundancy group, i.e. master and backup devices)**; and any tracked interfaces associated with

each one of the at least one address that is internal to the backup router **(column 6 lines 40-44; each device maintains an IP interface)**.

Regarding claim 28, Liu discloses a state of at least one of the at least one address that is external to the backup router group **(column 5 lines 11-16; detecting failures such link connectivity due to cable or port failures)**.

Regarding claim 29, Liu discloses wherein the detecting is also based on a state of at least one of the at least one address that is external to the backup router group **(column 5 lines 11-16; detecting failures such link connectivity due to cable or port failures)**.

Regarding claim 32, Ofek discloses receiving status information from the routers **(page 2 paragraph 0021; a change in the status of an element)**; and updating the topology object model to reflect the received status information **(page 2 paragraph 0021; the status is recorded in the Topology Object Model)**.

Regarding claim 33, Liu discloses wherein the status information includes states associated with interface addresses within the at least one backup router group **(column 5 lines 17-25; detecting failures of devices within the group)**.

Regarding claim 34, Liu discloses wherein the status information includes status of tracked interfaces associated with routers organized in the at least one backup router group **(column 5 lines 17-25; detecting failures of devices within the group)**.

Regarding claim 35, Ofek discloses at least one network node object representing an element in the network **(page 2 paragraph 0021; network topologies are determined and objects corresponding to elements in a domain are stored in**

a Topology Object Model); at least one network interface object for each at least one network node object, the at least one network interface object representing an interface of the network element corresponding to the each at least one network node object **(page 2 paragraph 0023; the Topology Object Model include a physical element representation such as a network interface card)**; an address object for each at least one network interface object, representing an address of the corresponding interface **(figure 4; the Topology Object Model include an elements IP address)**.

Ofek fails to explicitly suggest a backup routing protocol group object representing network elements organized in a backup routing protocol group, the backup routing protocol group object including a virtual address of the backup routing protocol group and real addresses of the network elements in the backup routing protocol group; and an address state object for each of the real addresses of the network elements in the backup routing protocol group, including a state of the corresponding address.

Liu teaches a backup routing protocol group object representing network elements organized in a backup routing protocol group **(a cluster of devices, i.e. figure 1 element 110, comprising a recovery system, i.e. figure 2, with a redundancy group, i.e. column 4 lines 21-30)**, the backup routing protocol group object including a virtual address of the backup routing protocol group and real addresses of the network elements in the backup routing protocol group **(each device has its own IP and MAC address, i.e. column 10 lines 36-34)**; and an address state object for each of the real addresses of the network elements in the backup routing

protocol group, including a state of the corresponding address **(figure 5 elements 510-530; state information of redundancy group)**.

It would have been obvious to one having ordinary skill in the art at the time the invention was made to incorporate the recovery method taught by Liu into the system for providing data awareness disclosed by Ofek. The motivation for such a modification is the ability to respond quickly to failures without compromising throughput and interrupting service.

Regarding claim 36, Liu discloses a track interface object corresponding to a tracked network interface of a first network element in the backup routing protocol group wherein the tracked network interface is located between the first network element and a network element outside the backup routing protocol group **(column 5 lines 11-16; detecting failures such link connectivity due to cable or port failures)**.

Regarding claim 37, Ofek discloses each network node object is related to one or more network interface objects **(page 2 paragraph 0023; elements modeled include physical representation such as a network interface card)**; each network interface object is related to one or more address objects **(figure 4; element IP address)**; and each address object is related to one or more network interface objects **(figure 4; number of ports and node WWN)**.

Liu teaches the backup routing protocol group is related to one or more network node objects **(column 4 lines 21-30; a cluster of security devices comprising a recovery system with a redundancy group)**; the backup routing protocol group is related to one or more address objects **(column 10 lines 36-34; each security device**

has its own IP and MAC address); each network node object is related to one or more backup routing protocol group objects **(column 4 lines 33-36; each security device can be designated as a master device for one redundancy group and a backup device for a different redundancy group)**.

b. Claims 2, 7, 13, 18, 25, and 30 are rejected under 35 U.S.C. 103(a) as being unpatentable over Ofek et al. (US 2004/0083284), in view of Liu et al. (US 7,197,660), and further in view of Yip et al. (US 6,954,436), hereinafter referred to as Yip.

Regarding claim 2, Ofek as modified by Liu disclose the limitations of the base claims.

However, Ofek, Liu, and/or their combination fail to explicitly suggest wherein the at least one threshold value includes a minimum number of available routers in a backup router group.

Yip teaches the at least one threshold value includes a minimum number of available routers in a backup router group **(column 4 lines 30-40; ping tracking parameter representative of active routers)**.

It would have been obvious to one having ordinary skill in the art at the time the invention was made to incorporate method of using tracking to select redundant routers taught by Yip into the system for providing data awareness disclosed by Ofek as modified by the recovery method suggested by Liu. The motivation for such a modification is avoiding erroneously selection of a router that cannot communicate.

Regarding claim 7, Ofek as modified by Liu disclose the limitations of the base claims.

However, Ofek, Liu, and/or their combination fail to explicitly suggest wherein the condition is a minimum number of functional routers available in a corresponding backup router group.

Yip teaches wherein the condition is a minimum number of functional routers available in a corresponding backup router group **(column 4 lines 50-51; diagnostic parameter representative of the functionality of routers)**.

It would have been obvious to one having ordinary skill in the art at the time the invention was made to incorporate method of using tracking to select redundant routers taught by Yip into the system for providing data awareness disclosed by Ofek as modified by the recovery method suggested by Liu. The motivation for such a modification is avoiding erroneously selection of a router that cannot communicate.

Regarding claim 8, Ofek as modified by Liu disclose the limitations of the base claims.

However, Ofek, Liu, and/or their combination fail to explicitly suggest wherein the condition is a minimum of functional routers available only in a corresponding backup router group.

Yip teaches wherein the condition is a minimum of functional routers available only in a corresponding backup router group **(column 4 lines 50-51; diagnostic parameter representative of the functionality of routers)**.

It would have been obvious to one having ordinary skill in the art at the time the invention was made to incorporate method of using tracking to select redundant routers taught by Yip into the system for providing data awareness disclosed by Ofek as modified by the recovery method suggested by Liu. The motivation for such a modification is avoiding erroneously selection of a router that cannot communicate.

Regarding claim 13, Ofek as modified by Liu disclose the limitations of the base claims.

However, Ofek, Liu, and/or their combination fail to explicitly suggest wherein the at least one threshold value includes a minimum number of available routers in a backup router group.

Yip teaches wherein the at least one threshold value includes a minimum number of available routers in a backup router group **(column 4 lines 30-40; ping tracking parameter representative of active routers)**.

It would have been obvious to one having ordinary skill in the art at the time the invention was made to incorporate method of using tracking to select redundant routers taught by Yip into the system for providing data awareness disclosed by Ofek as modified by the recovery method suggested by Liu. The motivation for such a modification is avoiding erroneously selection of a router that cannot communicate.

Regarding claim 18, Ofek as modified by Liu disclose the limitations of the base claims.

However, Ofek, Liu, and/or their combination fail to explicitly suggest wherein the condition is a minimum number of functional routers available in a corresponding backup router group.

Yip teaches a method for using a standby router protocol to determine the routers position as master or slave according to parameters such as a metric of the state of the functionality of the router **(column 4 lines 50-51; diagnostic parameter representative of the functionality of routers)**.

It would have been obvious to one having ordinary skill in the art at the time the invention was made to incorporate method of using tracking to select redundant routers taught by Yip into the system for providing data awareness disclosed by Ofek as modified by the recovery method suggested by Liu. The motivation for such a modification is avoiding erroneously selection of a router that cannot communicate.

Regarding claim 19, Ofek as modified by Liu disclose the limitations of the base claims.

Yip teaches a method for using a standby router protocol to determine the routers position as master or slave according to parameters such as a metric of the state of the functionality of the router **(column 4 lines 50-51; diagnostic parameter representative of the functionality of routers)**.

It would have been obvious to one having ordinary skill in the art at the time the invention was made to incorporate method of using tracking to select redundant routers taught by Yip into the system for providing data awareness disclosed by Ofek as

modified by the recovery method suggested by Liu. The motivation for such a modification is avoiding erroneously selection of a router that cannot communicate.

Regarding claim 25, Ofek as modified by Liu disclose the limitations of the base claims.

However, Ofek, Liu, and/or their combination fail to explicitly suggest wherein the at least one threshold value includes a minimum number of available routers in a backup router group.

Yip teaches a method for using a standby router protocol to determine the routers position as master or slave according to parameters such as a metric of active routers **(column 4 lines 30-40; ping tracking parameter representative of active routers)**.

It would have been obvious to one having ordinary skill in the art at the time the invention was made to incorporate method of using tracking to select redundant routers taught by Yip into the system for providing data awareness disclosed by Ofek as modified by the recovery method suggested by Liu. The motivation for such a modification is avoiding erroneously selection of a router that cannot communicate.

Regarding claim 30, Ofek as modified by Liu disclose the limitations of the base claims.

However, Ofek, Liu, and/or their combination fail to explicitly suggest wherein the condition is a minimum number of functional routers available in a corresponding backup router group.

Yip teaches a method for using a standby router protocol to determine the routers position as master or slave according to parameters such as a metric of the state of the functionality of the router **(column 4 lines 50-51; diagnostic parameter representative of the functionality of routers)**.

It would have been obvious to one having ordinary skill in the art at the time the invention was made to incorporate method of using tracking to select redundant routers taught by Yip into the system for providing data awareness disclosed by Ofek as modified by the recovery method suggested by Liu. The motivation for such a modification is avoiding erroneously selection of a router that cannot communicate.

Regarding claim 31, Ofek as modified by Liu disclose the limitations of the base claims.

Yip teaches a method for using a standby router protocol to determine the routers position as master or slave according to parameters such as a metric of the state of the functionality of the router **(column 4 lines 50-51; diagnostic parameter representative of the functionality of routers)**.

It would have been obvious to one having ordinary skill in the art at the time the invention was made to incorporate method of using tracking to select redundant routers taught by Yip into the system for providing data awareness disclosed by Ofek as modified by the recovery method suggested by Liu. The motivation for such a modification is avoiding erroneously selection of a router that cannot communicate.

(10) Response to Argument

a. Appellant's arguments filed August 22, 2008 have been fully considered but they are not persuasive.

Regarding claims 1, 12, 24, and 35, the Appellant respectfully traverse that the documents relied upon fail to teach, suggest, or provide any motivation for the invention. The Examiner respectfully disagrees. A rationale to support a conclusion that a claim would have been obvious is that all the claimed elements were known in the prior art and the combination would have yielded nothing more than predictable results to one of ordinary skill in the art. Obviousness does not require absolute predictability; however, at least some degree of predictability is required. Ofek discloses a method for tracking the movement of data between domains **(page 1 paragraph 0005)**, i.e. IP and/or Ethernet **(page 2 paragraph 0022)**. Liu teaches a recovery method including monitoring paths for detecting failure of connectivity **(column 2 lines 3-15)**, i.e. IP or Ethernet **(column 5 lines 17-25)**.

Now the Examiner recognizes that references cannot be arbitrarily used and that there must be some reason why one skilled in the art would be motivated to make the proposed modification. However, there is no requirement that a motivation be expressly articulated. The test for modifying a reference is what the disclosure would suggest to one of ordinary skill in the art at that time. Thus, the combination of Ofek and Liu is evaluated by what it recommends to one versed in the art, rather than by the specific disclosure. Both Ofek and Liu disclose tracking/monitoring of IP/Ethernet domain/connectivity. As the claims are reasonably interpreted in their broadest sense,

the Examiner believes these references suggest a valid motivation for their combination as applied above such that the modification would not render either invention unsatisfactory of its intended purpose. Therefore, the Applicant's invention is obvious, thus rendering it unpatentable.

Regarding claim 1:

The Appellant respectfully traverses that no topology object model is disclosed in any of the documents relied upon. The Examiner respectfully disagrees. Ofek teaches a method of determining network topologies and objects corresponding to elements in a Topology Object Model **(page 2 paragraph 0021)**, where elements include a physical component such as a switch **(page 2 paragraph 0023)**.

The Appellant respectfully traverses that there is no suggestion of at least one back up router group in any of the documents relied upon. The Examiner respectfully disagrees. Liu discloses a cluster of devices **(figure 1 element 100)** including a recovery system **(figure 2)** with a redundancy group **(column 4 lines 21-30)**.

The Appellant respectfully traverses there is no teaching of detecting a condition based on a threshold value in any of the documents relied upon. The Examiner respectfully disagrees. Liu suggests detecting a failure within the cluster of devices according to a threshold parameter **(column 5 lines 17-25)**.

The Appellant respectfully traverses there is no disclosure for displaying a condition in any of the documents relied upon. The Examiner respectfully disagrees. Ofek teaches graphically displaying a change in the status of an element **page 2 paragraph 0021)**.

Since the Appellant fails to explicitly suggest the definition of a "detected condition", the Examiner interprets this feature as a change in the status of an element as taught by Ofek, i.e. failure of an element as taught by Liu. Therefore, the Examiner asserts that as the claims are reasonably interpreted in their broadest sense, the Ofek patent as modified by the Liu patent indeed does render the Appellant's invention obvious for the motivation to respond quickly to failures without compromising throughput and interrupting service. Specifically their combination entails Ofek storing network topologies in a Topology Object Model and displaying a change in a status, (i.e. taught by Liu's failure detection based on a threshold), of network elements, (i.e. taught by Liu's redundancy group).

Furthermore, the Appellant provides the argument of there being no routers which use a backup routing protocol in either publication. However, the Examiner notes claim 1 as being written extremely broad in comparison to that of succeeding claims, i.e. claim 35, such that it does not even recite this particular limitation within the body of the claim. Therefore, this particular argument for claim 1 will not need to be addressed.

Regarding claim 12:

The Appellant explicitly discloses that claim 12 recites features similar to those discussed with respect to claim 1. Therefore the Examiner extends the same arguments for claim 1 to claim 12.

Regarding claim 24:

The Appellant explicitly discloses that claim 24 recites features similar to those discussed with respect to claim 1. Therefore the Examiner extends the same arguments for claim 1 to claim 24.

Regarding claim 35:

The Appellant respectfully traverse there is no discussion to the use of backup routing protocols in any of the documents relied upon. The Examiner respectfully disagrees. Liu's present invention relates to redundancy protocols **(column 1 lines 7-8)**, i.e. recovery protocols **(column 1 lines 51-63)**. Also, figures 5-6 show a protocol for stateful recovery and a protocol for active-active configuration, each protocol effecting redundancy groups **(column 8 lines 10-19 and lines 45-58)**.

The Examiner interprets the feature of a "backup routing protocol group" as the protocols, i.e. figures 5-6, relating to redundancy groups taught by Liu. Therefore, the Examiner asserts that as the claims are reasonably interpreted in their broadest sense, the Ofek patent as modified by the Liu patent indeed does render the Appellant's invention obvious for the motivation to respond quickly to failures without compromising throughput and interrupting service. Specifically their combination involves Ofek storing network topologies in a Topology Object Model and displaying a change in a status, (i.e. taught by Liu's failure detection based on a threshold), of network elements, (i.e. taught by Liu's redundancy group incorporating protocols).

The Appellant explicitly discloses that claim 35 recites features similar to those discussed with respect to claim 1. Therefore the Examiner extends the same arguments for claim 1 to claim 35.

Regarding claims 3, 14, and 26:

Liu teaches detecting a failure within the cluster of devices according to a threshold parameter. Liu further suggests allowing for a single device to operate in multiple backup groups simultaneously. Therefore Liu's threshold parameter could be applied to detecting a failure in the active-active configuration.

The Examiner notes these claims depend on claims 1, 12, and 24, respectively, and therefore are rejected for at least the same reasons as can be seen above.

Regarding claims 5, 16, and 28:

Ofek teaches a method of determining network topologies and objects corresponding to elements in a Topology Object Model **(page 2 paragraph 0021)**, where elements include a physical component such as a switch **(page 2 paragraph 0023)**. Liu teaches a self monitor for detecting local failures such as the loss of Ethernet link connectivity. This method of detection is external to a recovery system.

The Examiner notes these claims depend on claims 1, 12, and 24, respectively, and therefore are rejected for at least the same reasons as can be seen above.

Regarding claims 6, 17, and 29:

Liu teaches a self monitor for detecting local failures such as the loss of Ethernet link connectivity. This method of detection is external to a recovery system.

The Examiner notes these claims depend on claims 1, 12, and 24, respectively, and therefore are rejected for at least the same reasons as can be seen above.

Regarding claim 36:

Ofek teaches a method of determining network topologies and objects corresponding to elements in a Topology Object Model, where elements include a physical component such as a switch. Liu teaches a self monitor for detecting local failures such as the loss of Ethernet link connectivity. This method of detection is external to a recovery system.

The Examiner notes these claims depend on claim 35 and therefore is rejected for at least the same reasons as can be seen above.

Regarding claim 37:

Liu teaches a self monitor for detecting local failures such as the loss of Ethernet link connectivity. This method of detection is external to a recovery system.

The Examiner notes these claims depend on claim 35 and therefore is rejected for at least the same reasons as can be seen above.

Regarding claims 2, 13, and 25:

Liu teaches a path monitor method for detecting failure of devices within a group. Yip teaches a pinging method for tracking diagnostic parameters representative of a functionality of a group of routers. The detection/tracking of the routers could be representative of any condition.

The Examiner notes these claims depend on claims 1, 12, and 24, respectively, and therefore are rejected for at least the same reasons as can be seen above.

Regarding claims 7, 18, and 30:

Liu teaches a path monitor method for detecting failure of devices within a group. Yip teaches a pinging method for tracking diagnostic parameters representative of a

functionality of a group of routers. The detection/tracking of the routers could be representative of any condition.

The Examiner notes these claims depend on claims 1, 12, and 24, respectively, and therefore are rejected for at least the same reasons as can be seen above.

Regarding claims 8, 19, and 31:

Liu teaches a path monitor method for detecting failure of devices within a group. Yip teaches a pinging method for tracking diagnostic parameters representative of a functionality of a group of routers. The detection/tracking of the routers could be representative of any condition.

The Examiner notes these claims depend on claims 1, 12, and 24, respectively, and therefore are rejected for at least the same reasons as can be seen above.

(11) Related Proceeding(s) Appendix

No decision rendered by a court or the Board is identified by the examiner in the Related Appeals and Interferences section of this examiner's answer.

For the above reasons, it is believed that the rejections should be sustained.

Respectfully submitted,

/FEBEN HAILE/

Examiner, Art Unit 2474

Conferees:

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